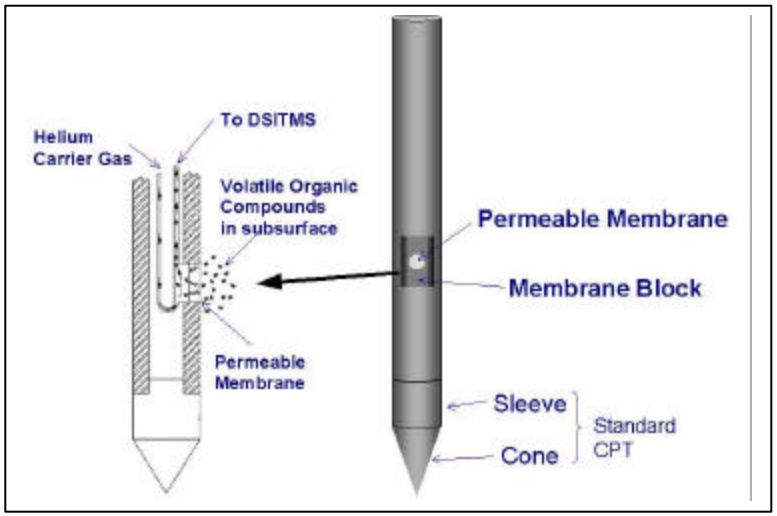
Membrane Interface Probe System for Direct Push System (TechID 2950)

The Membrane Interface Probe System (MIPS) is a Cone Penetrometer-deployed probe for the field screening of high concentration dissolved Volatile Organic Compounds (VOCs). The MIPS incorporates a heated semi-permeable membrane into the cone penetrometer tip. VOCs diffuse through the membrane into a carrier gas, which circulates through tubing to analytical instruments at the surface. Once the MIPS probe is retracted, the hole can be grouted through the CP rod itself.



Developers:

- Originally designed by Geoprobe, Inc. for their direct push pneumatic hammer equipment
- This commercial sensor integrated into a standard geophysical cone penetrometer tip by U.S. Army Corps of Engineers
- Combined technology tested and demonstrated by the Savannah River Technical Center

Applications:

- Can be used anywhere Cone Penetrometer can be deployed
- Detects dissolved VOCs in groundwater at moderate to high concentrations, allowing for rapid determination of spatial extent of contamination

Benefits:

- MIPS provides quick, depth-discrete detection and quantitation of dissolved phase organic constituents
- Although detection limit not as low as with baseline drilling, sampling and laboratory analysis technology, substantial time and cost savings available when MIPS can be used and meets DQOs

Status:

- Tested, demonstrated and deployed at Savannah River Site during September 1999
- Commercially available from GeoProbe Systems, Inc. (www.geoprobesystems.com)